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FRANK HURLBUT CHITTENDEN

Bureau men and women will have seen, in the Official Record of September 26, a notice of Doctor Chittenden's death and some account of his career. Briefly, he was born in Cleveland, November 3, 1858, graduated from Cornell University in 1881, and was given the degree of Doctor of Science by the University of Pittsburg in 1904. He joined the Department of Agriculture in April, 1891, and served continuously until his death, on September 15.

Chittenden was a born entomologist, and always collected insects. He was at Cornell during the period when Professor Comstock had charge of the entomological work here in Washington; and he therefore failed to get the benefit he would have derived from association with Comstock. The locum tenens at Ithaca was W. S. Barnard, who was not as experienced an entomologist as was Chittenden himself. It resulted that the latter did just as he pleased during his last two years at Cornell, and this did not please Barnard; consequently, on completing his course, he was not given a bachelor's degree, but only a licentiate. After he left Ithaca he lived in Brooklyn, where he was one of the founders of the Brooklyn Entomological Society and also one of the editors of Entomologica Americana. I think that his appointment to Washington in 1891 was made through the just organized U. S. Civil Service Commission. He was active in the great amount of editorial work connected with the publication of Insect Life and the bulletins of the Division, and soon became greatly interested in the subject of insects affecting truck crops and also insects affecting stored foods. In the useful bulletin published by the Department in 1896 entitled "Household Insects," he contributed the important chapter on stored-food insects. As time went on he became the chief of a section of Bureau work devoted to these two subjects, and built up a strong force, and was the author of very many important papers.

He was a very quiet, studious man, who traveled little and seldom attended meetings. But his knowledge of insects was very great. Those of us who knew him best here in Washington, and who worked with him for very many years, think that he was probably the most learned man in America on everything relating to the insects that are found in the garden. His especial work was in Coleoptera, and since his retirement from the active supervision of his section he had been living quietly at his home on Vermont Avenue and working with certain groups of beetles in which he was particularly interested. He never married, and since the death of his widowed mother a number of years ago, his widowed sister, Mrs. Charles J. Jones, lived with him.

FOREST INSECTS

F. C. Craighead, in Charge

Doctor Craighead spent the first week in September inspecting the field work at Asheville, N. C. R. A. St. George has been in charge of the field laboratory there since J. A. Beal left it. Considerable progress has been made with technique for injecting poisons into trees infested with *Dendroctonus*. Under certain conditions it is now possible to kill the development broods of this beetle, but the method is not sufficiently practicable for control operations on a large scale.

On August 27 R. W. Caird, plant physiologist, who has been employed at the field laboratory at Asheville this summer, fell out of the top of a pine tree which he was examining, and sustained a fractured pelvis. He will be laid up for two or three months.

J. C. Evenden reports that an unusually large number of calls have been made for examination of forest areas infested by Dendroctonus monticolae. This insect has increased rapidly during the past year, especially in forests of the white-pine type, and recommendations have been made to the Forest Service that several large control projects be undertaken.

Messrs. Miller, Keen, and Person, of the field laboratory at Palo Alto, spent a week in September with several officers of the Forest Service in an experimental marking area on the Modoc National Forest, Calif. A considerable body of timber on this forest was sold last year because of the infestation by insects. Part of the area will be marked so as to leave after cutting only those trees which are considered not susceptible to the attack of the western pine beetle. This will constitute the first real attempt on a large scale to put into effect the results of experimental studies of the past three years.

L. G. Baumhofer closed up the season's activities at Halsey, Nebr., in September. He reports most gratifying results from the introduction of an eastern parasite (Campoplex sp.), in the control of the infestation by the pine tip moth in Forest Service plantations. The percentage of parasitism of the tip moth has been increased from around 15 to 20 per cent to over 80 per cent, and already the effect is indicated by more normal growth of the pines.

Doctor T. E. Snyder returned to Washington on September 18, after attending the meetings of the Termite Investigations Committee, under the auspices of the University of California, at Berkeley, Calif., September 1 to 4. The termite problem in California is becoming serious, and the State is fortunate in having such a committee to cooperate with the Pacific Coast Building Officials' Conference, the County Agricultural Commissioners, and the State Department of Agriculture, in their efforts not only to protect buildings from damage by termites but also to

protect citizens from ignorant or fraudulent commercial operators in the control of these insects. All operators now doing commercial work in termite control in eight of the southern counties of California are required to pass an examination on their ability, and, after examination by county officials, to present a certificate showing that they are qualified. Considerable work is being done by the Termite Investigations Committee in fundamental studies of the distribution, biology, and control of termites.

Contributions from the Gipsy-Moth Laboratory

Recoveries of two tachinid parasites of the gipsy moth, made during the summer of 1929, indicate for the first time that these species have become established in New England. One of them, Sturmia inconspicua Meig., besides being a parasite of the gipsy moth in Europe, attacks a number of sawflies, including Diprion simile Hartig, which is now present in certain of the Northeastern States. The other, Phorocera agilis R. D., is one of the most important insect enemies of the gipsy moth in Europe. Shipments of Sturmia inconspicua were received at the Gipsy-Moth Laboratory as early as 1906, and Phorocera agilis was first received in 1907. Especially during the past five years rather large numbers of adults of both species have been colonized.

C. F. W. Muesebeck, of the Gipsy-Moth Laboratory, was in Maine September 26 to 28, where, in company with H. B. Peirson, Forest Entomologist of that State, he saw some of the investigational work that Mr. Peirson is carrying on with a birch leaf-mining sawfly, Phyllotoma nemorata Fall. Extremely heavy infestations by this foreign pest were first reported from Maine by Mr. Peirson in 1927. Reports received at the Gipsy-Moth Laboratory in September indicated that it was very abundant in the White Mountain section of New Hampshire and in the vicinity of Marlboro, Vt. The species was also reported from certain other sections of New Hampshire, Vermont, and Massachusetts.

Among recent visitors at the Gipsy-Moth Laboratory were Dr. W. V. Balduf, University of Illinois, September 7; and John Hadjinicolaon, Athens, Greece, and D. W. Jones, of the Corn-Borer Laboratory, Arlington, Mass., September 18.

W. L. Baker, who graduated from the Clemson Agricultural College in 1927, and who has since then taken postgraduate work at the University of Minnesota, was given a probationary appointment as Junior Entomologist, on September 16, reporting for work at the Gipsy-Moth Laboratory.

T. H. Jones and C. F. W. Muesebeck, of the Gipsy-Moth Laboratory, visited the Bartlett Tree Research Laboratories at Stamford, Conn., on September 23.

BEE CULTURE

Jas. I. Hambleton, in Charge

Jas. I. Hambleton attended the meeting of the American Honey Institute, at Stevens Hotel, Chicago, on September 24. At this meeting Dr. H. E. Barnard, President of the Institute, gave a report of its work for the past six months. Although the American Honey Institute has been in operation for only a short time it has already done very excellent work in increasing the demand for honey. It has succeeded in arousing the interest of many bakers' organizations in the use of honey, and has been instrumental in arranging honey displays in connection with dietetic meetings, food shows, and the like. It is working in close cooperation with the Bee Culture Laboratory and other Government offices which are interested in the production and utilization of honey. It is financed by the Bee Industries Association, an organization of manufacturers and dealers in bee supplies, honey bottlers, and beekeepers' organizations.

E. L. Sechrist has returned from a six weeks' trip in the Intermountain States, where, among beekeepers who are cooperating in this work, he continued studies on problems of honey production. A preliminary report has just been issued, dealing with the data obtained during 1928. Plans are under way to inaugurate similar studies in the white-clover belt. A number of States are anxious to help in the work, and are offering the Department facilities which will enable it to be undertaken on a very comprehensive basis.

The Mountain States Honey Producers' Association has appealed to the Federal Farm Loan Board for assistance which, it is hoped, will be useful in stabilizing prices of honey. A. W. B. Kjosness, of Boise, Idaho, who is general manager of the Association, came to Washington in the latter part of September and presented the Association's case to the Federal Farm Loan Board. By invitation, H. C. Clay, of the Bureau of Agricultural Economics, and Jas. I. Hambleton attended the meetings at which this was done. The presentation was well received, and if it is approved, as seems likely, the effect should be very beneficial. In this action the Mountain States Honey Producers' Association has taken an important step forward, and is leading the way for other associations of honey producers which, if organized on a purely cooperative basis, might be benefitted by similar action.

A. W. B. Kjosness, of Boise, Idaho, mentioned in the preceding paragraph, and O. A. Lende, of Minneapolis, Minn., visited the Bee Culture Laboratory on September 20.

A paper dealing with honey production in the United States, which has been prepared in the Bee Culture Laboratory, will be distributed through the Foreign Section of the Bureau of Agricultural Economics to honey buyers in Germany and other foreign countries who have signified a desire to have available, for distribution to the honey trade, literature dealing with the types of honey and methods of production in the United States.

Dr. L. M. Bertholf, who continued this summer, at the Bee Culture Laboratory, his studies on the reaction of bees to light of various wave lengths and intensities, resigned his temporary appointment on August 29 to resume his duties at Western Maryland College, Westminster, Md..

TRUCK CROP INSECTS

J. E. Graf, in Charge

Early in September W. J. Reid, Jr., returned to Charleston, S. C., after spending the summer at Columbus, Ohio, assisting Dr. D. M. DeLong, of Ohio State University, in experiments on the control of the potato leafhopper.

J. C. Elmore, of the field laboratory at Garden Grove, Calif., visited points in New Mexico and Texas early in September to make observations on the pepper weevil and to arrange for certain cooperative experiments on this insect with the entomologists of the New Mexico State College.

J. E. Dudley, Jr., of the field laboratory at Madison, Wis., visited Washington, D. C., September 12 and 13, to confer with Bureau officials regarding his work for the past season on the pea aphid.

F. S. Chamberlin, of the field laboratory at Quincy, Fla., visited Washington, D. C., September 16 and 17, to confer with Bureau officials regarding his work on tobacco insects.

C. I. Bliss, of the New Orleans, La., field laboratory, visited the field laboratory at Biloxi, Miss., on September 9.

The temporary appointments as field assistants of L. L. Odom, H. Rosen, J. H. Lilly, O. W. Rosewall, L. Jones, R. W. Dean, J. F. Roe, G. H. York, J. F. Bock, P. M. Eide, A. C. Cole, Jr., H. L. Wiseman, and H. A. Waters have been terminated.

Resignations have been accepted from D. M. DeLong, F. W. Fletcher, D. F. Miller, and R. W. Brubaker, who have been serving as temporary field assistants, in order that they might return to duties at the Ohio State University.

P. K. Harrison, Junior Entomologist, who has been stationed at Picayune, Miss., and employed with this division for more than three years, resigned September 8, in order to pursue work towards a master's degree at the University of Maryland.

TAXONOMY

Harold Morrison, in Charge

Dr. W. T. M. Forbes, of Cornell University, Ithaca, N. Y., spent September 10 to 25 in the National Museum studying the Porto Rican Lepidoptera and consulting the bureau specialists in Lepidoptera.

Dr. H. L. Dozier, formerly State Entomologist of Delaware, who has accepted a position as head of the entomological work in the Department of Agriculture, Republic of Haiti, visited Washington September 12 and 20 to make notes on type specimens of certain Chalcidoidea, particularly the Myrmaridae, and to copy portions of the card catalogue of the family.

H. C. Fall, of Tyngsboro, Mass., a well-known student of Coleoptera, spent September 17 to 19 examining various types in the Casey collection of Coleoptera, especially those in the families Melyridae, Alleculidae, and certain Curculionidae.

Dr. W. V. Balduf, who is on a year's sabbatical leave from the department of entomology, University of Illinois, at Urbana, arrived in Washington September 24, and plans to spend considerable time during the coming fall and winter months in the taxonomic unit completing a revision of the North American species of the chalcidoid genus Decatoma. He will also study the literature dealing with entomophagous insects.

C. H. Curran, of the American Museum of Natural History, New York City, came to Washington September 24, and spent two days comparing certain muscoid flies with material in the National collection.

Dr. W. H. W. Komp, U. S. Public Health Service, Greenwood, Miss., and Dr. E. P. Coffey, U. S. Public Health Service, Washington, D. C., called at the taxonomic unit September 26 to discuss mosquito problems with the bureau specialist on Diptera, C. T. Greene.

Frank Walsh, manager of the operating department, Dixie Steamship Company, located at New Orleans, La., called at the Museum recently and made inquiry regarding the Mediterranean fruit fly.

INSECTS AFFECTING MAN AND ANIMALS

F. C. Bishopp, in Charge

F. C. Bishopp left Washington September 26 on a trip of several days' duration to points in South Carolina and Georgia to investigate outbreaks in that region of the pigeon fly, (Lynchia) Pseudolynchia maura.

D. G. Hall has returned to his work at Coachella, Calif., and reports that rains during the latter part of the month brought out immense swarms of the eye gnat, Hippelates sp.

DECIDUOUS-FRUIT INSECTS

A. L. Quaintance, in Charge

In connection with his membership in the Department Pecan Committee, Dr. B. A. Porter visited in the month of September the pecan-insect field laboratories at Albany and Experiment, Ga., Shreveport, La., and Brownwood, Tex. On his return trip Dr. Porter stopped off for a short visit to the field laboratories at Wichita, Kans., Bentonville, Ark., and Vincennes, Ind.

On September 3 Samuel A. Summerland was appointed Junior Entomologist, and assigned to duty at Bentonville, Ark., where he will be associated with A. J. Ackerman in investigations of apple insects.

Dr. E. C. Auchter and Dr. Chas. Brooks, of the Bureau of Plant Industry, visited the field laboratory at Yakima, Wash., September 16.

Oliver I. Snapp was in Washington in the latter part of August for conferences relative to peach-insect work in the South. Before returning to his headquarters at Fort Valley, Ga., he visited the field laboratory at Moorestown, N. J., to observe the work being conducted there on the oriental fruit moth and the Japanese beetle.

Visitors to the field laboratory at Fort Valley, Ga., in September included Dr. S. B. Fracker and G. W. Davidson, of the Plant Quarantine and Control Administration, and W. C. Bewley, general manager of the Georgia Peach Growers' Exchange.

At a meeting of peach growers in Macon, Ga., on September 24 to discuss control measures for peach pests and adopt a program of work, Oliver I. Snapp spoke on the curculio and other peach insects which had severely damaged the peach crop in the past year. Two hundred Georgia peach growers attended this meeting.

Contributions from the Japanese-Beetle Laboratory

Dr. Alvah Peterson spent several days at the Japanese-Beetle Laboratory, early in August, working over data on certain parasites of the oriental peach moth.

G. J. Haeussler, who recently sailed for Europe in search of parasites of the oriental peach moth, is now located at Antibes, Alps Maritimes, France. He reports finding plenty of indications of infestation in peach, with the season too far advanced for much rearing of parasites this year.

On September 12 C. H. Brannon, of the North Carolina State College of Agriculture, visited the Laboratory.

On September 14 Dr. W. V. Balduf, of the Department of Entomology, University of Illinois, visited the Laboratory to inspect the parasite work carried on there.

CEREAL AND FORAGE INSECTS

W. H. Larrimer, in Charge

Dr. W. J. Phillips, in charge of the field laboratory at Charlottesville, Va., spent September 5 in the Washington office.

In September appointments as Junior Entomologist have been given Merrill M. Darley, for duty at Salt Lake City, Utah, and Sam O. Hill, for duty at Arlington, Mass.

W. R. Walton made a tour of inspection of the corn-borer research work and general conditions in Ohio, Michigan, and southern Ontario, Canada, during the period September 18 to 21, inclusive. Accompanied by D. J. Caffrey he visited the laboratory and developmental farm at Toledo, Ohio, and the experimental plats and laboratory at Sandusky, Ohio, and examined the general laboratory and parasite work conducted at Monroe, Mich. One day was spent inspecting the conditions of infestation in Kent and Essex Counties in Ontario.

Dr. W. H. Larrimer spent September 20 to 28 in the vicinity of Toledo, Ohio, and Monroe, Mich., on business relating to the meetings of the Joint Committees on corn-borer research. These committees held their regular conference at Toledo September 25 to 28. Various State regulatory officials were invited to attend the conference, together with well-known farmers and educators from various parts of the Corn Belt. No general conference was held this year. However, arrangements were made to receive individuals or groups at 615 Front Street, Toledo, the headquarters for corn-borer control, and direct them over the corn-borer area very much as has been done heretofore. The attendance at the regular conferences on the corn borer in recent years has been so great as to become unwieldy, inconvenient, and unduly expensive, both to those attending these conferences and to those making arrangements for the tours of inspection over the infested area. State delegations and other groups have therefore found it more convenient to visit the corn-borer area at some time other than that of the general field conference, in order to make the most out of the time and expense involved in such a trip.

COTTON INSECTS

B. R. Coad, in Charge

Dr. Frank E. Lutz, curator of entomology, and A. E. Butler, assistant chief of the department of preparation, of the American Museum of Natural History, New York City, were at the Delta Laboratory, Tallulah, La., September 22 to 26, selecting for the Museum some material for an exhibit of the cotton-boll weevil and its work.

Dr. S. A. Jones and Jas. A. Becker, Statisticians, Bureau of Agricultural Economics, were visitors to the field laboratory at Tallulah on September 17, in the course of their tour of the Cotton States in the investigation of effects of the boll weevil on cotton yields.

H. H. Schultz, Statistician, Bureau of Agricultural Economics, Austin, Tex., was a visitor to the field laboratory at Tallulah on September 17.

T. P. Cassidy left Tallulah September 22 for return to the field laboratory at Tucson, Ariz.. He planned to visit en route several points in Oklahoma where cooperative experiments on the boll weevil are being conducted.

L. L. Urich, Mechanical Engineer, with headquarters at Tallulah, and G. M. Stone, temporary Field Assistant, with headquarters at Florence, S. C., were appointed and reported for duty in September.

Employees resigning in September were E. W. Dunnam, Associate Entomologist, and W. A. Brunson, R. W. Bunn, J. A. Downs, L. D. Christensen, V. C. Howell, C. F. Rainwater, Josh Randolph, B. C. Stephenson, J. G. Shaw, K. H. Smith, and H. D. Tate, temporary Field Assistants.

LIBRARY

Mabel Colcord, Librarian

NEW BOOKS

Arion, George, and Panin, S. A.

Prodromul faunei entomologice din Romania. Coleoptera (Cicindelidae, Carabidae). 67 p. Bucuresti, Toroutiu, 1928. (Rumania.)

Ministerul agriculturii industrii, comerciului. Buletinul Agriculturii, v. 6, suppl.)

Arthold, Matthias.

Handbuch des Weinbaues . . . 368 p., illus. Leipzig, A. Hartlebein's Verlag, 1929.) Schädlinge und Krankheiten des Rebstocks, p. 255-336.)

Attems-Petzenstein, K. A. T. M.

Geophilomorphs. 388 p., illus. Berlin, Gruyter, 1929. (Das Tierreich, Lfg. 52, Myriapoda 1.)

Banister, H.

Elementary applications of statistical methods. 56 p. London and Glasgow, Blackie & Son, Ltd., 1929.

Blake, Edward.

Blake's patent bee hive . . . broadside, illus. Hartford, Me., 1821. (Legal paper transferring patent to William F. Hayes.)

Bliss, H. E.

The organization of knowledge and the system of the sciences . . . with an introduction by John Dewey. 433 p. New York, Holt, 1929.

Borgmeier, Thomaz.

Algumas novas formigas brasileiras. Archivos do Museu nacional, Rio de Janeiro, v. 29, p. 57-64, 1927; Catalogo systematico e synonymico das formigas do Brazil, 2e parte, p. 69-164.

Bruner, S. C.

Resena de las plagas del cafeto en Cuba. 38 p., 12 pl. Habana, Imprenta y papelaria de Rambla, 1929. (Cuba. Secretaria de Agr. Com. y Trabajo. Estacion Experimental Agronomica, Santiago de Las Vegas. Circ. 68, June, 1929.)

Dürken, Bernhard.

Lehrbuch der Experimentalzoologie, experimentelle Entwicklungslehre der Tiere. Ed. 2. 782 p., illus. Berlin, Borntraeger, 1923. (Literaturverzeichnis, p. 690-750.)

Escherich, Karl.

Die Flug Zeugbestäubung gegen Forstsäädlinge. 60 p., illus. Berlin, Parey, 1929. (Flugschrift d. Deutscher Gesellschaft f. Angewandte Entomologie 12.) (Literatur, p. 58-60.)

Galiano, E.

Los animales parásitos. 199 p., illus., maps. Buenos Aires, Barcelona, 1928. (Colección labor. Sección XII. Ciencias naturales No. 169.)

Götze, G.

Die Bienenzucht als landwirtschaftliche Nebenbetrieb . . . 144 p., illus. Stuttgart, Eugen Ulmer, 1929.

Graebner, Paul.

Lehrbuch der allgemeinen Pflanzengeographie und entwicklungs-geschichtlichen und physiologisch-ökologischen Gesichtspunkten, bearbeitet von Paul Graebner . . . Ed. 2, Enl. 320 p., illus. Leipzig, Quelle u. Meyer, 1929.

Manson, Sir Patrick.

Manson's Tropical diseases-Manual of the diseases of warm climates. Ed. by Philip H. Manson-Bahr. Ed. 9, rev. 921 p., illus., 35 pl., maps. London, &c., Cassell & Company, limited, 1929. (Medical entomology, p. 729-843.)

Martinez, J. J.

Les abeilles, Conference. Comptes Rendus de l'Athene Louisianais, ser. 3, v. 1, liv. 1, p. 19-37 and liv. 2, p. 33-68. Nouvelle-Orleans, Imprimerie Franco-American, 1885.

Mexico-Secretaria de agricultura y fomento. Oficina federal para la defensa agricola.

Boletin de divulgacion num. 11. Manera de identificar y combatir los plagas y enfermedades de las plantas de cultivo. 52 p., illus. Tacuba, D. F., Mexico, Sec. de agr. y fomento, 1929.

Mexico-Secretaria de agricultura y fomento.Direccion de agricultura. Guia practica para el principiante en la cria y explotacion del gusano de seda, por el sr. Santiago Sanchez . . . 29 p., illus. Mexico, 1929.

Misra, R. B.

The cotton white fly (*Bemisia gossypiperda* n. sp.) 7 p., col. pl. Calcutta, Central Publications Branch, 1929. (Pusa. Agr. Research Inst. Bul. 196.)

Mokrzhetzkii, S. A.

. . . Strzygonia choinowka (Panolis flammea Schiff. Monografja lesno-entomologiczna . . .) Die Forleule (Panolis flammea Schiff.) Forstentomologische Monographie. 131 p., illus., 2 col. pl., map. Wydano z zasilku Ministerstwa rolnictwa. Warzawa, Nakladem zwiazku zawod. lesnikow rzeczy. pospolitej polskiej, 1928. (Spis literatury, p. [125]-131.)

Partridge, William.

Dictionary of bacteriological equivalents. French-English, German-English, Italian-English. 141 p. London, Baillière, Tindall & Cox; Baltimore, Williams & Wilkins Co., 1927.

Perrier, Remy.

La faune de la France en tableaux synoptiques illustrés, fasc. 2. Arachnides et crustacés avec la collaboration de Lucien Berland et de Léon Bertin . . . 220 p., illus. Paris, Delagrave, 1929.

Reichenow, Eduard, and Wülker, Gerh.

Leitfaden zu Untersuchungen der thierischen Parasiten des Menschen und der Haustiere . . . Zugleich neue Aufl. des gleichnamigen Leitfadens von Braun und Lühe. 235 p., illus. Leipzig, Curt Kabitsch, 1929.

Richie, James.

Clover mites (*Bryobia pratensis*) invading dwelling house. Scottish Naturalist No. 178, p. 126, July-August, 1929.

Shelford, V. E.

Laboratory and field ecology. The responses of animals as indicators of correct working methods. 608 p., illus. Baltimore, Williams & Wilkins Company, 1929. (Bibliography, p. 541-596.)

Smith, Bernard.

The sheep blow-flies of South Africa. 27 p., illus., col. pl. Pretoria, Government Printing Office, 1929. (Union of South Africa. Dept. Agr. Bul. 47.)

Tellez, Oliverio.

Prontuario de parasitologia agricola animal y vegetal. 70 p., illus. Mexico, Bartolome Trucco, 1929.

True, A. C.

A history of agricultural education in the United States, 1785-1925. 436 p., illus. Washington, Government Printing Office, 1929. (U. S. Dept. Agr. Misc. Pub. 36, July, 1929.) (Bibliography, p. 397-420.)

Uvarov, B. P.

. . . Weather and climate in their relations to insects. 20 p. London, His Majesty's Stationery Office, 1929. At head of title: Conference of empire meterologists. 1929.

Yule, G. U.

An introduction to the theory of statistics. Ed. 8, rev. 422 p., illus. London, Charles Griffin & Company, limited, 1927.